

<b>TSC Category</b>	Discipline Engineering Support Management					
<b>TSC</b>	Equipment and System Value Engineering Management					
<b>TSC Description</b>	Develop and evaluate discipline-specific engineering equipment and systems to continuously improve process plant performance within manufacturers' safe operating parameters and limits					
<b>TSC Proficiency Description</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>	<b>Level 6</b>
				ECM-DES-4003-1.1	ECM-DES-5003-1.1	
				Interpret and analyse designs and specifications of discipline-specific engineering equipment and systems to conduct value engineering for process plant performance	Evaluate designs and specifications of discipline-specific engineering equipment and systems to devise value engineering solutions for optimal process plant performance	
<b>Knowledge</b>				<ul style="list-style-type: none"> <li>• Concepts of value engineering and analysis</li> <li>• Applications of value engineering in the workplace</li> <li>• Value engineering project phases</li> <li>• Value engineering matrices</li> <li>• Analysis approach to compare new versus re-built, existing versus new technologies, labour versus automation for best value engineering solutions</li> <li>• Types of cost and quality management in value engineering</li> <li>• Systematic problem-solving techniques</li> </ul>	<ul style="list-style-type: none"> <li>• Value techniques, principles and practices, including value management (VM), value planning (VP), value engineering (VE) and value analysis (VA)</li> <li>• Value engineering project selection methods</li> <li>• Value engineering risk identification and risk management</li> <li>• Evaluation approach and methodology for the comparison of new versus re-built, existing versus new technologies, labour versus automation</li> <li>• Types of cost benefit analysis</li> </ul>	

<p><b>Abilities</b></p>				<ul style="list-style-type: none"> <li>• Interpret designs and specifications of discipline-specific engineering equipment and systems</li> <li>• Analyse and develop value engineering concepts and feasibility studies</li> <li>• Apply value engineering techniques and principles to optimise processes and plant performance</li> <li>• Facilitate the execution of value engineering-related projects</li> <li>• Perform analyses for comparison of new versus re-built, existing versus new technologies, labour versus automation to recommend best value engineering solutions</li> </ul>	<ul style="list-style-type: none"> <li>• Manage value engineering-related projects and teams</li> <li>• Evaluate and select value engineering projects</li> <li>• Apply value engineering principles and practices to projects, plants and equipment</li> <li>• Calculate financial benefits of value engineering projects</li> <li>• Identify and manage risks associated with value engineering activities</li> <li>• Evaluate comparisons of new versus re-built, existing versus new technologies, labour versus automation to devise best value engineering solutions</li> </ul>	
-------------------------	--	--	--	--	---	--